

**WHAT IS CLAIMED IS:**

1           1.     An Intelligent Network Service Control Point (IN-SCP) for  
2     providing services to users in a telecommunications network, said IN-  
3     SCP comprising:

4                 at least one Call Processing Language (CPL) script that generates  
5     a call-control instruction when the script is executed; and

6                 means for executing the CPL script in response to receiving a  
7     service trigger for the script.

1           2.     The IN-SCP of claim 1 wherein the CPL script is defined by  
2     the user, and the IN-SCP includes a CPL script interpreter for mapping  
3     semantics of the CPL script to IN procedural detection points.

1           3.     The IN-SCP of claim 2 further comprising at least one block  
2     of service provider-defined IN service logic that provides at least one  
3     service when executed.

1           4.     The IN-SCP of claim 3 further comprising:  
2                 a user database that stores, for each user, a list of IN service logic  
3     and CPL scripts that are to be executed for each service trigger that is  
4     received by the IN-SCP; and

5 a service logic prioritizer that determines an order in which the IN  
6 service logic and the CPL scripts are to be executed.

1 5. A system in a telecommunications network for providing  
2 services to users, said system comprising:

3 an Intelligent Network Service Control Point (IN-SCP), said IN-  
4 SCP comprising:

5 at least one Call Processing Language (CPL) script that  
6 generates a first call-control instruction when executed;

7 means for executing the CPL script in response to receiving  
8 a service trigger for the script; and

9 communication means for receiving the service trigger from  
10 a call server and sending the call-control instruction to the call server;

11 a user profile database that stores the service trigger; and

12 a call server that retrieves the service trigger from the user profile  
13 database, sends the service trigger to the IN-SCP, receives the call-control  
14 instruction from the IN-SCP, and executes the call-control instruction to  
15 provide the service to the user.

1 6. The system of claim 5 wherein the CPL script is defined by  
2 the user, and the IN-SCP includes a CPL script interpreter for mapping  
3 semantics of the CPL script to IN procedural detection points.

1           7.     The system of claim 6 wherein the IN-SCP also includes at  
2     least one block of service provider-defined IN service logic that provides  
3     a second call-control instruction when executed.

1           8.     The system of claim 7 wherein the IN-SCP also includes:  
2             a user database that stores, for each user, a list of IN service logic  
3     and CPL scripts that are to be executed for each service trigger that is  
4     received by the IN-SCP; and  
5             a service logic prioritizer that determines an order in which the IN  
6     service logic and the CPL scripts are to be executed.

1           9.     The system of claim 5 wherein the CPL script is defined by  
2     the user, and the system further comprises a network administrative entity  
3     that verifies the CPL script and sends the verified script to the IN-SCP.

1           10.    The system of claim 9 wherein the administrative entity also  
2     determines the service trigger for the CPL script and sends the service  
3     trigger to the user profile database.

1           11. A method of provisioning a service in a telecommunications  
2 network having an Intelligent Network Service Control Point (IN-SCP),  
3 a user profile repository that stores a user profile, and a network  
4 Administrative Entity (AE), said method comprising the steps of:

5           receiving in the AE, a user-defined Call Processing Language  
6 (CPL) script that generates a call-control instruction when the script is  
7 executed;

8           determining by the AE whether the CPL script can be successfully  
9 executed in the network; and

10          upon determining that the CPL script can be successfully executed  
11 in the network:

12           modifying the user profile in the user profile repository to  
13 include a service trigger for the CPL script; and

14           storing the verified CPL script in the IN-SCP.

1           12. The method of claim 11 further comprising rejecting the  
2 script upon determining that the CPL script cannot be successfully  
3 executed in the network.

1           13. The method of claim 12 further comprising, before the step  
2 of determining whether the CPL script can be successfully executed in the  
3 network, the step of determining by the AE whether the CPL script is  
4 well-formed.

1           14. The method of claim 13 further comprising rejecting the  
2 script upon determining that the CPL script is not well-formed.

1           15. The method of claim 11 further comprising, upon  
2 determining that the CPL script can be successfully executed in the  
3 network, modifying the user profile in the user profile repository to  
4 include an identification of the IN-SCP where the CPL script is stored.

1           16. A method of providing a service to a user in a  
2 telecommunications network having an Intelligent Network Service  
3 Control Point (IN-SCP), a user profile repository that stores a user profile,  
4 and a call server that controls calls to and from the user, said method  
5 comprising the steps of:

6           storing a user-defined Call Processing Language (CPL) script in the  
7 IN-SCP, said script generating at least one call-control instruction when  
8 the script is executed;

9 receiving in the IN-SCP, a service trigger for the script from the call  
10 server;  
11 executing the CPL script in response to receiving the service trigger  
12 for the script;  
13 sending the call-control instruction to the call server; and  
14 executing the call-control instruction by the call server to provide  
15 the service to the user.

1 17. The method of claim 16 further comprising, before the step  
2 of executing the CPL script, mapping semantics of the CPL script to IN  
3 procedural detection points.

1 18. The method of claim 17 further comprising the steps of:  
2 determining whether the IN-SCP also stores service provider-  
3 defined IN service logic for the user; and  
4 upon determining that the IN-SCP also stores IN service logic for  
5 the user, executing the service provider-defined IN service logic before  
6 executing the user-defined CPL script.

1           19.    The method of claim 18 wherein the call server retrieves user  
2   profile information from the user profile repository when the user  
3   registers with the network, and the method further comprises, after the  
4   step of storing the user-defined CPL script in the IN-SCP, the steps of:  
5           receiving a call in the call server that is associated with the user;  
6           determining by the call server whether a service trigger is to be  
7   generated; and  
8           sending a request for call-control instructions from the call server  
9   to the IN-SCP, said request including an identification of the user and the  
10   service trigger.

1           20.    The method of claim 19 further comprising, after the step of  
2   receiving the service trigger in the IN-SCP, the steps of:  
3           retrieving a service logic (SL) list from a user database in the IN-  
4   SCP; and  
5           prioritizing the service provider-defined IN service logic and the  
6   user-defined CPL script.

1           21.    The method of claim 20 wherein the step of prioritizing the  
2   service provider-defined IN service logic and the user-defined CPL script  
3   includes prioritizing the service provider-defined IN service logic and the  
4   user-defined CPL script in a Service Interaction Manager (SIM) in the IN-  
5   SCP.

1           22.    The method of claim 20 further comprising, after the step of  
2   prioritizing the service provider-defined IN service logic and the user-  
3   defined CPL script, the steps of:

4               determining whether the service provider-defined IN service logic  
5   and the user-defined CPL script are consistent; and

6               ignoring the user-defined CPL script if it is inconsistent with the  
7   service provider-defined IN service logic.